## **COMPETENCY STANDARDS**



# SOLID WASTE MANAGEMENT OPERATION LEVEL III

**UTILITIES SECTOR** 

**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY** 

East Service Road, South Luzon Expressway, Taguig City, Metro Manila

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#### **UTILITIES SECTOR**

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## COMPETENCY STANDARDS FOR SOLID WASTE MANAGEMENT OPERATION LEVEL III

## SECTION 1: SOLID WASTE MANAGEMENT OPERATION LEVEL III QUALIFICATIONS

The Solid Waste Management Operation Level III Qualification consists of competencies that must be possessed to enable a person to plan and supervise solid waste management activities, supervise staff in solid waste management operation and to facilitate human resource capacitation.

The units of competency comprising this qualification include the following:

Code	BASIC COMPETENCIES
400311319	Lead workplace communication
400311320	Lead small teams
400311321	Apply critical thinking and problem-solving techniques in the workplace
400311322	Work in a diverse environment
400311323	Propose methods of applying learning and innovation in the organization
400311324	Use information systematically
400311325	Evaluate occupational safety and health work practices
400311326	Evaluate environmental work practices
400311327	Facilitate entrepreneurial skills for micro-small-medium enterprises (MSMEs)
Code	COMMON COMPETENCIES
UTL9611201	Develop and update industry knowledge
UTL9611202	Perform workplace security and safety practices
UTL9611203	Maintain environmental health and awareness in the workplace
Code	CORE COMPETENCIES
CS-UTL325303 CS-UTL325304 CS-UTL325305	Plan solid waste management activities Supervise solid waste management activities Supervise staff in solid waste management operation

#### A person who has achieved this Qualification is competent to be an:

- Solid Waste Management Site Supervisor
- Solid Waste Management Operations Supervisor
- > Project Supervisor

#### SECTION 2: COMPETENCY STANDARDS

This section gives the details of the contents of the basic, common, and core units of competency required for Solid Waste Management Operation Level III.

#### **BASIC COMPETENCIES**

**UNIT OF COMPETENCY: LEAD WORKPLACE COMMUNICATION** 

UNIT CODE : 400311319

**UNIT DESCRIPTOR**: This unit covers the knowledge, skills and attitudes required to

lead in the dissemination and discussion of ideas, information

and issues in the workplace.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
Communicate information about workplace processes	<ul> <li>1.1. Relevant communication method is selected based on workplace procedures</li> <li>1.2. Multiple operations involving several topics/areas are communicated following enterprise requirements</li> <li>1.3. Questioning is applied to gain extra information</li> <li>1.4. Relevant sources of information are identified in accordance with workplace/client requirements</li> <li>1.5. Information is selected and organized following enterprise procedures</li> <li>1.6. Verbal and written reporting is undertaken when required</li> <li>1.7. Communication and negotiation skills are applied and maintained in all relevant situations</li> </ul>	1.1. Organization requirements for written and electronic communication methods 1.2. Effective verbal communication methods 1.3. Business writing 1.4. Workplace etiquette	1.1. Organizing information 1.2. Conveying intended meaning 1.3. Participating in a variety of workplace discussions 1.4. Complying with organization requirements for the use of written and electronic communication methods 1.5. Effective business writing 1.6. Effective clarifying and probing skills 1.7. Effective questioning techniques (clarifying and probing)
Lead workplace discussions	<ul> <li>2.1. Response to workplace issues are sought following enterprise procedures</li> <li>2.2. Response to workplace issues are provided immediately</li> <li>2.3. Constructive contributions are made to workplace discussions on such issues as production, quality and safety</li> </ul>	2.1 Organization requirements for written and electronic communication methods 2.2 Effective verbal communication methods 2.3 Workplace etiquette	2.1 Organizing information 2.2 Conveying intended meaning 2.3 Participating in variety of workplace discussions 2.4 Complying with organization requirements for the use of written and electronic

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.4. Goals/objectives and action plans undertaken in the workplace are communicated promptly		communication methods 2.5 Effective clarifying and probing skills
3. Identify and communicate issues arising in the workplace	<ul> <li>3.1. Issues and problems are identified as they arise</li> <li>3.2. Information regarding problems and issues are organized coherently to ensure clear and effective communication</li> <li>3.3. Dialogue is initiated with appropriate personnel</li> <li>3.4. Communication problems and issues are raised as they arise</li> <li>3.5. Identify barriers in communication to be addressed appropriately</li> </ul>	<ul> <li>3.1. Organization requirements for written and electronic communication methods</li> <li>3.2. Effective verbal communication methods</li> <li>3.3. Workplace etiquette</li> <li>3.4. Communication problems and issues</li> <li>3.5. Barriers in communication</li> </ul>	3.1. Organizing information 3.2. Conveying intended meaning 3.3. Participating in a variety of workplace discussions 3.4. Complying with organization requirements for the use of written and electronic communication methods 3.5. Effective clarifying and probing skills 3.6. Identifying issues 3.7. Negotiation and communication skills

VARIABLE	RANGE
1. Methods of	May include:
communication	1.1. Non-verbal gestures
	1.2. Verbal
	1.3. Face-to-face
	1.4. Two-way radio
	1.5. Speaking to groups
	1.6. Using telephone
	1.7. Written
	1.8. Internet
2. Workplace discussions	May include:
	2.1. Coordination meetings
	2.2. Toolbox discussion
	2.3. Peer-to-peer discussion

1.	Critical aspects of	Assessment requires evidence that the candidate:		
	Competency	1.1. Dealt with a range of communication/information at one time		
		Demonstrated leadership skills in workplace communication		
		1.3. Made constructive contributions in workplace issues		
		1.4. Sought workplace issues effectively		
		1.5. Responded to workplace issues promptly		
		1.6. Presented information clearly and effectively written form		
		1.7. Used appropriate sources of information		
		1.8. Asked appropriate questions		
		1.9. Provided accurate information		
2.	Resource	The following resources MUST be provided:		
	Implications	2.1. Variety of Information		
		2.2. Communication tools		
		2.3. Simulated workplace		
3.	Methods of	Competency in this unit must be assessed through		
	Assessment	3.1. Case problem		
		3.2. Third-party report		
		3.3. Portfolio		
		3.4. Interview		
		3.5. Demonstration/Role-playing		
4.	Context for Assessment	4.1. Competency may be assessed in the workplace or in simulated workplace environment		

**UNIT OF COMPETENCY: LEAD SMALL TEAMS** 

UNIT CODE : 400311320

**UNIT DESCRIPTOR**: This unit covers the knowledge, skills and attitudes to lead

small teams including setting, maintaining and monitoring

team and individual performance standards.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Provide team leadership	<ul> <li>1.1. Work requirements are identified and presented to team members based on company policies and procedures</li> <li>1.2. Reasons for instructions and requirements are communicated to team members based on company policies and procedures</li> <li>1.3. Team members' queries and concerns are recognized, discussed and dealt with based on company practices</li> </ul>	1.1. Facilitation of Team work 1.2. Company policies and procedures relating to work performance 1.3. Performance standards and expectations 1.4. Monitoring individual's and team's performance vis a vis client's and group's expectations	1.1. Communication skills required for leading teams 1.2. Group facilitation skills 1.3. Negotiating skills 1.4. Setting performance expectation
Assign responsibilities	2.1. Responsibilities are allocated having regard to the skills, knowledge and aptitude required to undertake the assigned task based on company policies.  2.2. Duties are allocated having regard to individual preference, domestic and personal considerations, whenever possible	2.1. Work plan and procedures 2.2. Work requirements and targets 2.3. Individual and group expectations and assignments 2.4. Ways to improve group leadership and membership	<ul> <li>2.1. Communication skills</li> <li>2.2. Management skills</li> <li>2.3. Negotiating skills</li> <li>2.4. Evaluation skills</li> <li>2.5. Identifying team member's strengths and rooms for improvement</li> </ul>
Set performance expectations for team members	<ul> <li>3.1 Performance expectations are established based on client needs</li> <li>3.2 Performance expectations are based on individual team members knowledge, skills and aptitude</li> <li>3.3 Performance expectations are discussed and disseminated to individual team members</li> </ul>	<ul> <li>3.1 One's roles and responsibilities in the team</li> <li>3.2 Feedback giving and receiving</li> <li>3.3 Performance expectation</li> </ul>	3.1 Communication skills 3.2 Accurate empathy 3.3 Congruence 3.4 Unconditional positive regard 3.5 Handling of Feedback
Supervised team performance	4.1 Performance is monitored based on defined performance criteria and/or assignment instructions	4.1 Performance Coaching 4.2 Performance management	4.1 Communication skills required for leading teams 4.2 Coaching skill

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	4.2 Team members are provided with <i>feedback</i> , positive support and advice on strategies to overcome any deficiencies based on company practices	4.3 Performance Issues	
	4.3 <b>Performance issues</b> which cannot be rectified or addressed within the team are referenced to appropriate personnel according to employer policy		
	4.4 Team members are kept informed of any changes in the priority allocated to assignments or tasks which might impact on client/customer needs and satisfaction		
	4.5 Team operations are monitored to ensure that employer/client needs and requirements are met		
	4.6 Follow-up communication is provided on all issues affecting the team		
	4.7 All relevant documentation is completed in accordance with company procedures		

VARIABLE	RANGE
Work requirements	May include: 1.1. Client Profile
	1.2. Assignment instructions
Team member's concerns	May include:
2. Fount member o concerne	2.1. Roster/shift details
Monitor performance	May include:
o. Wormer performance	3.1. Formal process
	3.2. Informal process
4. Feedback	May include:
	4.1. Formal process
	4.2. Informal process
5. Performance issues	May include:
3. 1 chomanec issues	5.1. Work output
	5.2. Work quality
	5.3. Team participation
	5.4. Compliance with workplace protocols
	5.5. Safety
	5.6. Customer service

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Critical aspects of Competency	<ul> <li>Assessment requires evidence that the candidate:</li> <li>1.1. Maintained or improved individuals and/or team performance given a variety of possible scenario</li> <li>1.2. Assessed and monitored team and individual performance against set criteria</li> <li>1.3. Represented concerns of a team and individual to next level of management or appropriate specialist and to negotiate on their behalf</li> <li>1.4. Allocated duties and responsibilities, having regard to individual's knowledge, skills and aptitude and the needs of the tasks to be performed</li> <li>1.5. Set and communicated performance expectations for a range of tasks and duties within the team and provided feedback to team members</li> </ul>
2. Resource Implications	The following resources MUST be provided: 2.1. Access to relevant workplace or appropriately simulated environment where assessment can take place 2.2. Materials relevant to the proposed activity or task
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1. Written Examination 3.2. Oral Questioning 3.3. Portfolio
Context for     Assessment	4.1. Competency may be assessed in actual workplace or at the designated TESDA Accredited Assessment Center

UNIT OF COMPETENCY: APPLY CRITICAL THINKING AND PROBLEM SOLVING

**TECHNIQUES IN THE WORKPLACE** 

UNIT CODE : 400311321

**UNIT DESCRIPTOR**: This unit covers the knowledge, skills and attitudes required to

solve problems in the workplace including the application of problem solving techniques and to determine and resolve the

root cause/s of specific problems in the workplace.

	PERFORMANCE CRITERIA		
ELEMENT	Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
Examine specific workplace challenges	<ul> <li>1.1. Variances are examined from normal operating parameters; and product quality.</li> <li>1.2. Extent, cause and nature of the specific problem are defined through observation, investigation and analytical techniques.</li> <li>1.3. Problems are clearly stated and specified.</li> </ul>	<ul> <li>1.1. Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations.</li> <li>1.2. Competence to include the ability to apply and explain, enough for the identification of fundamental causes of specific workplace challenges.</li> <li>1.3. Relevant equipment and operational processes.</li> <li>1.4. Enterprise goals, targets and measures.</li> <li>1.5. Enterprise quality OHS and environmental requirements.</li> <li>1.6. Enterprise information systems and data collation</li> <li>1.7. Industry codes and standards.</li> </ul>	1.1. Using a range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of information) in examining specific challenges in the workplace. 1.2. Identifying extent and causes of specific challenges in the workplace.
2. Analyze the causes of specific workplace challenges	<ul> <li>2.1. Possible causes of specific problems are identified based on experience and the use of problem solving tools / analytical techniques.</li> <li>2.2. Possible cause statements are</li> </ul>	2.1 Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize nonstandard situations.	2.1 Using range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of
	developed based on findings.  2.3. Fundamental causes are identified per results of investigation conducted.	2.2 Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause,	information) in examining specific challenges in the workplace.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		determining the corrective action and provision of recommendations.  2.3 Relevant equipment and operational processes.  2.4 Enterprise goals, targets and measures.  2.5 Enterprise quality OSH and environmental requirement.  2.6 Enterprise information systems and data collation.  2.7 Industry codes and standards.	<ul> <li>2.2 Identifying extent and causes of specific challenges in the workplace.</li> <li>2.3 Providing clear-cut findings on the nature of each identified workplace challenges.</li> </ul>
3. Formulate resolutions to specific workplace challenges	<ul> <li>3.1. All possible options are considered for resolution of the problem.</li> <li>3.2. Strengths and weaknesses of possible options are considered.</li> <li>3.3. Corrective actions are determined to resolve the problem and possible future causes.</li> <li>3.4. Action plans are developed identifying measurable objectives, resource needs and timelines in accordance with safety and operating procedures</li> </ul>	<ul> <li>3.1. Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations</li> <li>3.2. Relevant equipment and operational processes</li> <li>3.3. Enterprise goals, targets and measures</li> <li>3.4. Enterprise quality OSH and environmental requirement</li> <li>3.5. Principles of decision making strategies and techniques</li> <li>3.6. Enterprise information systems and data collation</li> <li>3.7. Industry codes and standards</li> </ul>	3.1. Using a range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of information) in examining specific challenges in the workplace. 3.2. Identifying extent and causes of specific challenges in the workplace. 3.3. Providing clear-cut findings on the nature of each identified workplace challenges. 3.4. Devising, communicating, implementing and evaluating strategies and techniques in addressing specific workplace challenges.

ELEMENT	PERFORMANCE CRITERIA  Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
4. Implement action plans and communicate results	<ul> <li>4.1. Action plans are implemented and evaluated.</li> <li>4.2. Results of plan implementation and recommendations are prepared.</li> <li>4.3. Recommendations are presented to appropriate personnel.</li> <li>4.4. Recommendations are followed-up, if required.</li> </ul>	<ul> <li>4.1 Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations</li> <li>4.2. Relevant equipment and operational processes</li> <li>4.3 Enterprise goals, targets and measures</li> <li>4.4 Enterprise quality, OSH and environmental requirement</li> <li>4.5 Principles of decision making strategies and techniques</li> <li>4.6 Enterprise information systems and data collation</li> <li>4.7 Industry codes and standards</li> </ul>	4.1 Using a range of analytical techniques (e.g., planning, attention, simultaneous and successive processing of information) in examining specific challenges in the workplace. 4.2 Identifying extent and causes of specific challenges in the workplace. 4.3 Providing clear-cut findings on the nature of each identified workplace challenges. 4.4 Devising, communicating, implementing and evaluating strategies and techniques in addressing specific workplace challenges.

VARIABLES	RANGE
1. Parameters	May include:
	<ul><li>1.1 Processes</li><li>1.2 Procedures</li><li>1.3 Systems</li></ul>
2. Analytical techniques	May include:
	<ul> <li>2.1. Brainstorming</li> <li>2.2. Intuitions/Logic</li> <li>2.3. Cause and effect diagrams</li> <li>2.4. Pareto analysis</li> <li>2.5. SWOT analysis</li> <li>2.6. Gant chart, Pert CPM and graphs</li> <li>2.7. Scattergrams</li> </ul>
3. Problem	May include:
	<ul> <li>3.1. Routine, non – routine and complex workplace and quality problems</li> <li>3.2. Equipment selection, availability and failure</li> <li>3.3. Teamwork and work allocation problem</li> <li>3.4. Safety and emergency situations and incidents</li> <li>3.5. Risk assessment and management</li> </ul>
4. Action plans	May include:
	<ul> <li>4.1. Priority requirements</li> <li>4.2. Measurable objectives</li> <li>4.3. Resource requirements</li> <li>4.4. Timelines</li> <li>4.5. Coordination and feedback requirements</li> <li>4.6. Safety requirements</li> <li>4.7. Risk assessment</li> <li>4.8. Environmental requirements</li> </ul>

Critical a     Compete		essment requires evidence that the candidate: Examined specific workplace challenges. Analyzed the causes of specific workplace challenges. Formulated resolutions to specific workplace challenges. Implemented action plans and communicated results on specific workplace challenges.
2. Resourc	ons	Assessment will require access to an operating plant over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios / case studies / what ifs will be required as well as a bank of questions which will be used to probe the reason behind the observable action.
3. Methods Assessn	nent 3.1. 3.2. 3.3. 3.4. The cand runits situal opera asses shou walk Thes probl	Observation Case Formulation Life Narrative Inquiry Standardized Test unit will be assessed in a holistic manner as is practical may be integrated with the assessment of other relevant of competency. Assessment will occur over a range of tions, which will include disruptions to normal, smooth ation. Simulation may be required to allow for timely ssment of parts of this unit of competency. Simulation Id be based on the actual workplace and will include through of the relevant competency components.  The assessment activities should include a range of lems, including new, unusual and improbable situations may have happened.
4. Context Assessn	for 4.1.	In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

**WORK IN A DIVERSE ENVIRONMENT UNIT OF COMPETENCY:** 

**UNIT CODE** 400311322

**UNIT DESCRIPTOR** 

This unit covers the outcomes required to work effectively in a workplace characterized by diversity in terms of religions, beliefs, races, ethnicities and other differences.

	PERFORMANCE CRITERIA	REQUIRED	REQUIRED
ELEMENT	Italicized terms are elaborated in the Range of Variables	KNOWLEDGE	SKILLS
Develop an individual's cultural awareness and sensitivity	<ul> <li>1.1. Individual differences with clients, customers and fellow workers are recognized and respected in accordance with enterprise policies and core values.</li> <li>1.2. Differences are responded to in a sensitive and considerate manner</li> <li>1.3. <i>Diversity</i> is accommodated using appropriate verbal and non-verbal communication.</li> </ul>	<ul> <li>1.1. Understanding cultural diversity in the workplace</li> <li>1.2. Norms of behavior for interacting and dialogue with specific groups (e. g., Muslims and other non-Christians, non-Catholics, tribes/ethnic groups, foreigners)</li> <li>1.3. Different methods of verbal and nonverbal communication in a multicultural setting</li> </ul>	1.1. Applying cross-cultural communication skills (i.e. different business customs, beliefs, communication strategies)  1.2. Showing affective skills — establishing rapport and empathy, understanding, etc.  1.3. Demonstrating openness and flexibility in communication  1.4. Recognizing diverse groups in the workplace and community as defined by divergent culture, religion, traditions and practices
2. Work effectively in an environment that acknowledges and values cultural diversity	<ul> <li>2.1 Knowledge, skills and experiences of others are recognized and documented in relation to team objectives.</li> <li>2.2 Fellow workers are encouraged to utilize and share their specific qualities, skills or backgrounds with other team members and clients to enhance work outcomes.</li> <li>2.3 Relations with customers and clients are maintained to show that diversity is valued by the business.</li> </ul>	2.1 Value of diversity in the economy and society in terms of Workforce development 2.2 Importance of inclusiveness in a diverse environment 2.3 Shared vision and understanding of and commitment to team, departmental, and organizational goals and objectives 2.4 Strategies for customer service excellence	2.1 Demonstrating cross-cultural communication skills and active listening 2.2 Recognizing diverse groups in the workplace and community as defined by divergent culture, religion, traditions and practices 2.3 Demonstrating collaboration skills 2.4 Exhibiting customer service excellence

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Identify common issues in a multicultural and diverse environment	<ul> <li>3.1 Diversity-related conflicts within the workplace are effectively addressed and resolved.</li> <li>3.2 Discriminatory behaviors towards customers/ stakeholders are minimized and addressed accordingly.</li> <li>3.3 Change management policies are in place within the organization.</li> </ul>	3.1 Value, and leverage of cultural diversity 3.2 Inclusivity and conflict resolution 3.3 Workplace harassment 3.4 Change management and ways to overcome resistance to change 3.5 Advanced strategies for customer service excellence	3.1 Addressing diversity-related conflicts in the workplace 3.2 Eliminating discriminatory behavior towards customers and coworkers 3.3 Utilizing change management policies in the workplace

	VARIABLE		RANGE
1.	Diversity	This refers to diversity in both the workplace and the community and may include divergence in :	
			gion
		1.2 Eth 1.3 Cul	nicity, race or nationality
			nder, age or personality
		1.5 Edu	cational background
2.	Diversity-related conflicts	May includ	de conflicts that result from:
		2.1 Dis	criminatory behaviors
		2.2 Diff	erences of cultural practices
		2.3 Diff	erences of belief and value systems
		2.4 Ge	nder-based violence
		2.5 Wo	rkplace bullying
		2.6 Co	porate jealousy
		2.7 Lar	iguage barriers
		2.8 Ind	viduals being differently-abled persons
		2.9 Age	ism (negative attitude and behavior
		tow	ards old people)

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Critical aspects of	Assessment requires evidence that the candidate:		
Competency	1.1 Adjusted language and behavior as required by		
	interactions with diversity		
	1.2 Identified and respected individual differences in		
	colleagues, clients and customers		
	1.3 Applied relevant regulations, standards and codes of		
	practice		
Resource	The following resources should be provided:		
Implications	2.1 Access to workplace and resources		
•	2.2 Manuals and policies on Workplace Diversity		
Methods of	Competency in this unit may be assessed through:		
Assessment	3.1 Demonstration or simulation with oral questioning		
	3.2 Group discussions and interactive activities		
	3.3 Case studies/problems involving workplace diversity		
	issues		
	3.4 Third-party report		
	3.5 Written examination		
Context for	4.1. Competency may be assessed in actual workplace		
Assessment	or at the designated TESDA Accredited Assessment		
	Center		
	Resource Implications  Methods of Assessment  Context for		

**UNIT OF COMPETENCY:** PROPOSE METHODS OF APPLYING LEARNING AND

INNOVATION IN THE ORGANIZATION

UNIT CODE 400311323

**UNIT DESCRIPTOR** This unit covers the knowledge, skills and attitudes required

to assess general obstacles in the application of learning and innovation in the organization and to propose practical

methods of such in addressing organizational challenges.

DEDECRMANOS ODITEDIA			
ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Assess work procedures, processes and systems in terms of innovative practices	<ul> <li>1.1. <i>Reasons</i> for innovation are incorporated to work procedures.</li> <li>1.2. <i>Models of innovation</i> are researched.</li> <li>1.3. <i>Gaps or barriers</i> to innovation in one's work area are analyzed.</li> <li>1.4. Staff who can support and foster innovation in the work procedure are identified.</li> </ul>	Refer to books, magazines, online research, e.g.  1.1 Seven habits of highly effective people.  1.2 Character strengths that foster innovation and learning (Christopher Peterson and Martin Seligman, 2004)  1.3 Five minds of the future concepts (Gardner, 2007).  1.4 Adaptation concepts in neuroscience (Merzenich, 2013).  1.5 Transtheoretical model of behavior change (Prochaska, DiClemente, & Norcross, 1992).	<ul> <li>1.1 Demonstrating collaboration and networking skills.</li> <li>1.2 Applying basic research and evaluation skills</li> <li>1.3 Generating insights on how to improve organizational procedures, processes and systems through innovation.</li> </ul>
2. Generate practical action plans for improving work procedures, processes	<ul> <li>2.1 Ideas for innovative work procedure to foster innovation using individual and group techniques are conceptualized</li> <li>2.2 Range of ideas with other team members and colleagues are evaluated and discussed</li> <li>2.3 Work procedures and processes subject to change are selected based on workplace requirements (feasible and innovative).</li> <li>2.4 Practical action plans are proposed to facilitate simple changes in the work procedures, processes and systems.</li> <li>2.5 Critical inquiry is applied and used to facilitate discourse on adjustments in the simple work</li> </ul>	Refer to books, magazines, online research, e.g.  2.1 Seven habits of highly effective people.  2.2 Character strengths that foster innovation and learning (Christopher Peterson and Martin Seligman, 2004)  2.3 Five minds of the future concepts (Gardner, 2007).  2.4 Adaptation concepts in neuroscience (Merzenich, 2013).  2.5 Transtheoretical model of behavior change (Prochaska, DiClemente, & Norcross, 1992).	<ul> <li>2.1 Assessing readiness for change on simple work procedures, processes and systems.</li> <li>2.2 Generating insights on how to improve organizational procedures, processes and systems through innovation.</li> <li>2.3 Facilitating action plans on how to apply innovative procedures in the organization.</li> </ul>

EL EMENT	PERFORMANCE CRITERIA	REQUIRED	REQUIRED
ELEMENT	Italicized terms are elaborated in the Range of Variables	KNOWLEDGE	SKILLS
3. Evaluate the effectiveness of the proposed action plans	in the Range of Variables procedures, processes and systems.  3.1 Work structure is analyzed to identify the impact of the new work procedures  3.2 Co-workers/key personnel is consulted to know who will be	fer to books, magazines, online research, e.g. 3.1 Five minds of the future concepts (Gardner, 2007). 3.2 Adaptation concepts in neuroscience	3.1 Generating insights on how to improve organizational procedures, processes and
	involved with or affected by the work procedure  3.3 Work instruction operational plan of the new work procedure is developed and evaluated.  3.4 Feedback and suggestions are recorded.  3.5 Operational plan is updated.  3.6 Results and impact on the developed work instructions are reviewed  3.7 Results of the new work procedure are evaluated  3.8 Adjustments are recommended based on results gathered	neuroscience (Merzenich, 2013). 3.3 Transtheoretical model of behavior change (Prochaska, DiClemente, & Norcross, 1992).	systems through innovation. 3.2 Facilitating action plans on how to apply innovative procedures in the organization. 3.3 Communicating results of the evaluation of the proposed and implemented changes in the workplace procedures and systems. 3.4 Developing action plans for continuous improvement on the basic systems, processes and procedures in the

VARIABLE	RANGE
1. Reasons	May include: 1.1. Strengths and weaknesses of the current systems, processes and procedures. 1.2. Opportunities and threats of the current systems, processes and procedures.
2. Models of innovation	May include: 2.1. Seven habits of highly effective people. 2.2. Five minds of the future concepts (Gardner, 2007). 2.3. Neuroplasticity and adaptation strategies.
Workplace requirements	May include: 3.1. Feasible 3.2. Innovative
4. Gaps or barriers	May include: 4.1. Machine 4.2. Manpower 4.3. Methods 4.4. Money
5. Critical Inquiry	<ul> <li>May include:</li> <li>5.1. Preparation.</li> <li>5.2. Discussion.</li> <li>5.3. Clarification of goals.</li> <li>5.4. Negotiate towards a Win-Win outcome.</li> <li>5.5. Agreement.</li> <li>5.6. Implementation of a course of action.</li> <li>5.7. Effective verbal communication. See our pages:</li></ul>

Critical aspects	Assessment requires evidence that the candidate:
of Competency	<ol> <li>1.1. Established the reasons why innovative systems are required</li> <li>1.2. Established the goals of a new innovative system</li> <li>1.3. Analyzed current organizational systems to identify gaps and barriers to innovation.</li> <li>1.4. Assessed work procedures, processes and systems in terms of innovative practices.</li> <li>1.5. Generated practical action plans for improving work procedures, and processes.</li> <li>1.6. Reviewed the trial innovative work system and adjusted reflected evaluation feedback, knowledge management systems and future planning.</li> <li>1.7. Evaluated the effectiveness of the proposed action</li> </ol>
Resource Implications	plans.  2.1. The following resources should be provided: 2.2. Pens, papers and writing implements. 2.3. Cartolina. 2.4. Manila papers.
3. Methods of Assessment	Competency in this unit may be assessed through:  3.1. Psychological and behavioral Interviews.  3.2. Performance Evaluation.  3.3. Life Narrative Inquiry.  3.4. Review of portfolios of evidence and third-party workplace reports of on-the-job performance.  3.5. Sensitivity analysis.  3.6. Organizational analysis.  3.7. Standardized assessment of character strengths and virtues applied.
Context for     Assessment	4.1. Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY: USE INFORMATION SYSTEMATICALLY

UNIT CODE : 400311324

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to

use technical information systems, apply information technology (IT) systems and edit, format & check information.

	PERFORMANCE CRITERIA	REQUIRED	REQUIRED
ELEMENT	Italicized terms are elaborated	KNOWLEDGE	SKILLS
	in the Range of Variables		
1. Use technical information	1.1. Information are collated and organized into a suitable form for reference and use  1.2. Stored information are classified so that it can be quickly identified and retrieved when needed  1.3. Guidance are advised and offered to people who need to find and use information	<ul> <li>1.1. Application in collating information</li> <li>1.2. Procedures for inputting, maintaining and archiving information</li> <li>1.3. Guidance to people who need to find and use information</li> <li>1.4. Organize information</li> <li>1.5. classify stored information for identification and retrieval</li> <li>1.6. Operate the technical information system by using agreed</li> </ul>	<ul> <li>1.1. Collating information</li> <li>1.2. Operating appropriate and valid procedures for inputting, maintaining and archiving information</li> <li>1.3. Advising and offering guidance to people who need to find and use information</li> <li>1.4. Organizing information into a suitable form for reference and use</li> <li>1.5. Classifying stored information for identification and retrieval</li> <li>1.6. Operating the technical information system by using</li> </ul>
2. Apply information technology (IT)	<ul> <li>2.1. Technical information system is operated using agreed procedures</li> <li>2.2. Appropriate and valid procedures are operated for inputting, maintaining and archiving information</li> <li>2.3. Required software are utilized to execute the project activities</li> <li>2.4. Information and data obtained are handled, edited, formatted and checked from a range of internal and external sources</li> <li>2.5. Information are extracted, entered, and processed to produce</li> </ul>	2.1. Attributes and limitations of available software tools 2.2. Procedures and work instructions for the use of IT 2.3. Operational requirements for IT systems 2.4. Sources and flow paths of data 2.5. Security systems and measures that can be used 2.6. Extract data and format reports 2.7. Methods of entering and processing information	agreed procedures  2.1. Identifying attributes and limitations of available software tools  2.2. Using procedures and work instructions for the use of IT  2.3. Describing operational requirements for IT systems  2.4. Identifying sources and flow paths of data  2.5. Determining security systems and measures that can be used  2.6. Extracting data and format reports

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	the outputs required by customers  2.6. Own skills and understanding are shared to help others  2.7. Specified security measures are implemented to protect the confidentiality and integrity of project data held in IT systems	2.8. Worldwide web (www) enabled applications	<ul><li>2.7. Describing methods of entering and processing information</li><li>2.8. Using WWW applications</li></ul>
3. Edit, format and check information	<ul> <li>3.1 Basic editing techniques are used</li> <li>3.2 Accuracy of documents are checked</li> <li>3.3 Editing and formatting tools and techniques are used for more complex documents</li> <li>3.4 Proofreading techniques is used to check that documents look professional</li> </ul>	<ul> <li>3.1 Basic file-handling techniques</li> <li>3.2 Techniques in checking documents</li> <li>3.3 Techniques in editing and formatting</li> <li>3.4 Proofreading techniques</li> </ul>	<ul> <li>3.1 Using basic file-handling techniques is used for the software</li> <li>3.2 Using different techniques in checking documents</li> <li>3.3 Applying editing and formatting techniques</li> <li>3.4 Applying proofreading techniques</li> </ul>

VARIABLE	RANGE
1. Information	May include:
	1.1. Property
	1.2. Organizational
	1.3. Technical reference
2. Technical information	May include:
	2.1. Paper based
	2.2. Electronic
3. Software	May include:
	3.1. Spreadsheets
	3.2. Databases
	3.3. Word processing
	3.4. Presentation
4. Sources	May include:
	4.1. Other IT systems
	4.2. Manually created
	4.3. Within own organization
	4.4. Outside own organization
	4.5. Geographically remote
5. Customers	May include:
	5.1. Colleagues
	5.2. Company and project management
	5.3. Clients
6. Security measures	May include:
	6.1. Access rights to input;
	6.2. Passwords;
	6.3. Access rights to outputs;
	6.4. Data consistency and back-up;
	6.5. Recovery plans

1.	Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1. Used technical information systems and information technology 1.2. Applied information technology (IT) systems 1.3. Edited, formatted and checked information
2.	Resource Implications	The following resources <u>MUST</u> be provided: 2.1. Computers 2.2. Software and IT system
3.	Methods of Assessment	Competency in this unit MUST be assessed through: 3.1. Direct Observation 3.2. Oral interview and written test
4.	Context for Assessment	4.1. Competency may be assessed in actual workplace or at the designated TESDA Accredited Assessment Center

UNIT OF COMPETENCY: EVALUATE OCCUPATIONAL SAFETY AND HEALTH

**WORK PRACTICES** 

UNIT CODE : 400311325

**UNIT DESCRIPTOR**: This unit covers the knowledge, skills and attitudes required to

interpret-Occupational Safety and Health practices, set OSH work targets, and evaluate effectiveness of Occupational

Safety and Health work instructions

EI EAAENIT	PERFORMANCE CRITERIA  Italicized terms are elaborated in	REQUIRED	REQUIRED
ELEMENT	the Range of Variables	KNOWLEDGE	SKILLS
1. Interpret Occupational Safety and Health practices	1.1. OSH work practices issues are identified relevant to work requirements  1.2. OSH work standards and procedures are determined based on applicability to nature of work  1.3. Gaps in work practices are identified related to relevant OSH work standards	1.1. OSH work practices issues 1.2. OSH work standards 1.3. General OSH principles and legislations 1.4. Company/ workplace policies/ guidelines 1.5. Standards and safety requirements of work process and procedures	<ul> <li>1.1. Communication skills</li> <li>1.2. Interpersonal skills</li> <li>1.3. Critical thinking skills</li> <li>1.4. Observation skills</li> </ul>
2. Set OSH work targets	<ul> <li>2.1. Relevant work information are gathered necessary to determine OSH work targets</li> <li>2.2. OSH Indicators based on gathered information are agreed upon to measure effectiveness of workplace OSH policies and procedures</li> <li>2.3. Agreed OSH indicators are endorsed for approval from appropriate personnel</li> <li>2.4. OSH work instructions are received in accordance with workplace policies and procedures*</li> </ul>	2.1. OSH work targets 2.2. OSH Indicators 2.3. OSH work instructions 2.4. Safety and health requirements of tasks 2.5. Workplace guidelines on providing feedback on OSH and security concerns 2.6. OSH regulations Hazard control procedures 2.7. OSH trainings relevant to work	<ul> <li>2.1. Communication skills</li> <li>2.2. Collaboration skills</li> <li>2.3. Critical thinking skills</li> <li>2.4. Observation skills</li> </ul>
3. Evaluate effectiveness of Occupational Safety and Health work instructions	3.1. OSH Practices are observed based on workplace standards 3.2. Observed OSH practices are measured against approved <i>OSH metrics</i> 3.3. Findings regarding effectiveness are assessed and gaps identified are implemented based on OSH work standards	<ul><li>3.1. OSH Practices</li><li>3.2. OSH metrics</li><li>3.3. OSH Evaluation         Techniques</li><li>3.4. OSH work standards</li></ul>	3.1. Critical thinking skills 3.2. Evaluating skills

	VARIABLE	RANGE
1.	OSH Work	May include:
	Practices Issues	1.1 Workers' experience/observance on presence of work
		hazards
		1.2 Unsafe/unhealthy administrative arrangements
		(prolonged work hours, no break-time, constant overtime, scheduling of tasks)
		1.3 Reasons for compliance/non-compliance to use of PPEs
		or other OSH procedures/policies/guidelines
2.	OSH Indicators	May include:
		2.1 Increased number of incidents of accidents, injuries
		2.2 Increased occurrence of sickness or health
		complaints/symptoms
		2.3 Common complaints of workers' related to OSH
	001114/	2.4 High absenteeism for work-related reasons
3.	OSH Work	May include:
	Instructions	3.1 Preventive and control measures and targets
		3.2 Eliminate the hazard (e.g. get rid of the dangerous machine)
		3.3 Isolate the hazard (e.g. keep the machine in a closed room and operate it remotely; barricade an unsafe area off)
		3.4 Substitute the hazard with a safer alternative (e.g. replace the machine with a safer one)
		3.5 Use administrative controls to reduce the risk (e.g. give trainings on how to use equipment safely; OSH-related topics, issue warning signages, rotation/shifting work schedule)
		3.6 Use engineering controls to reduce the risk (e.g. use safety guards to machine)
		3.7 Use personal protective equipment
		3.8 Safety, Health and Work Environment Evaluation
L		3.9 Periodic and/or special medical examinations of workers
4.	OSH metrics	May include:
		4.1 Statistics on incidence of accidents and injuries
		4.2 Morbidity (Type and Number of Sickness)
		4.3 Mortality (Cause and Number of Deaths)
		4.4 Accident Rate

Critical aspects of	Assessment requires evidence that the candidate:
Competency	1.1. Identify OSH work practices issues relevant to
	work requirements
	1.2. Identify gaps in work practices related to relevant
	OSH work standards
	1.3. Agree upon OSH Indicators based on gathered
	information to measure effectiveness of workplace
	OSH policies and procedures
	1.4. Receive OSH work instructions in accordance
	with workplace policies and procedures
	1.5. Compare Observed OSH practices with against
	approved OSH work instructions
	1.6. Assess findings regarding effectiveness based on
	OSH work standards
2. Resource Implications	The following resources should be provided:
· ·	2.1 Facilities, materials, tools and equipment
	necessary for the activity
3. Methods of Assessment	Competency in this unit may be assessed through:
	3.1 Observation/Demonstration with oral questioning
	3.2 Third party report
	3.3 Written exam
4. Context for Assessment	4.1. Competency may be assessed in actual
	workplace or at the designated TESDA
	Accredited Assessment Center

UNIT OF COMPETENCY : EVALUATE ENVIRONMENTAL WORK PRACTICES

UNIT CODE : 400311326

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude to interpret environmental Issues, establish targets to evaluate

environmental practices and evaluate effectiveness of

environmental practices

ELEMENTS	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
Interpret     environmental     practices, policies     and procedures	<ul> <li>1.1. Environmental work practices issues are identified relevant to work requirements</li> <li>1.2. Environmental Standards and Procedures nature of work are determined based on Applicability to nature of work</li> <li>1.3. Gaps in work practices related to Environmental Standards and Procedures are identified</li> </ul>	1.1. Environmental Issues 1.2. Environmental Work Procedures 1.3. Environmental Laws 1.4. Environmental Hazardous and Non-Hazardous Materials 1.5. Environmental required license, registration or certification	1.1. Analyzing Environmental Issues and Concerns 1.2. Critical thinking 1.3. Problem Solving 1.4. Observation Skills
Establish targets     to evaluate     environmental     practices	<ul> <li>2.1. Relevant information are gathered necessary to determine environmental work targets</li> <li>2.2. <i>Environmental indicators</i> based on gathered information are set to measure environmental work targets</li> <li>2.3. Indicators are verified with appropriate personnel</li> </ul>	2.1. Environmental Indicators 2.2. Relevant Environment Personnel or expert 2.3. Relevant Environmental Trainings and Seminars	2.1. Investigative Skills 2.2. Critical thinking 2.3. Problem Solving 2.4. Observation Skills
3. Evaluate effectiveness of environmental practices	<ul> <li>3.1. Work environmental practices are recorded based on workplace standards</li> <li>3.2. Recorded work environmental practices are compared against planned indicators</li> <li>3.3. Findings regarding effectiveness are assessed and gaps identified are implemented based on environment work standards and procedures</li> <li>3.4. Results of environmental assessment are conveyed to appropriate personnel</li> </ul>	3.1. Environmental Practices 3.2. Environmental Standards and Procedures	3.1. Documentation and Record Keeping Skills 3.2. Critical thinking 3.3. Problem Solving 3.4. Observation Skills

VARIABLE		RANGE
1. Environmental Work	May	include:
Practices Issues	1.1	Water Quality
	1.2	National and Local Government Issues
	1.3	Safety
	1.4	Endangered Species
	1.5	Noise
	1.6	Air Quality
	1.7	Historic
	1.8	Waste
	1.9	Cultural
<ol><li>Environmental</li></ol>	May i	nclude:
Indicators	2.1	Noise level
		Lighting (Lumens)
	2.3	Air Quality - Toxicity
	2.4	Thermal Comfort
	2.5	Vibration
	2.6	Radiation
	2.7	Quantity of the Resources
	2.8	Volume
	2.9	Water Quality

1. Critical aspects of	·
Competency	1.1. Identified environmental issues relevant to work requirements
	1.2. Identified gaps in work practices related to Environmental
	Standards and Procedures
	Gathered relevant information necessary to determine environmental work targets
	1.4. Set environmental indicators based on gathered information to measure environmental work targets
	Recorded work environmental practices are recorded based on workplace standards
	1.6. Conveyed results of environmental assessment to appropriate personnel
2. Resource	The following resources should be provided:
Implications	2.1 Workplace/Assessment location
	2.2 Legislation, policies, procedures, protocols and local ordinances relating to environmental protection
	2.3 Case studies/scenarios relating to environmental protection
3. Methods of	Competency in this unit may be assessed through:
Assessment	3.1 Written/ Oral Examination
	3.2 Interview/Third Party Reports
	3.3 Portfolio (citations/awards from GOs and NGOs, certificate of
	training – local and abroad)
	3.4 Simulations and role-plays
4. Context for	4.1. Competency may be assessed in actual workplace or at the
Assessment	designated TESDA Accredited Assessment Center

UNIT OF COMPETENCY: FACILITATE ENTREPRENEURIAL SKILLS FOR MICRO-

**SMALL-MEDIUM ENTERPRISES (MSMEs)** 

UNIT CODE : 400311327

UNIT DESCRIPTOR : This unit covers the outcomes required to build, operate and

grow a micro/small-scale enterprise.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Develop and maintain micro-small-medium enterprise (MSMEs) skills in the organization	<ul> <li>1.1 Appropriate business strategies are determined and set for the enterprise based on current and emerging business environment.</li> <li>1.2 Business operations are monitored and controlled following established procedures.</li> <li>1.3 Quality assurance measures are implemented consistently.</li> <li>1.4 Good relations are maintained with staff/workers.</li> <li>1.5 Policies and procedures on occupational safety and health and environmental concerns are constantly observed.</li> </ul>	1.1 Business models and strategies 1.2 Types and categories of businesses 1.3 Business operation 1.4 Basic Bookkeeping 1.5 Business internal controls 1.6 Basic quality control and assurance concepts 1.7 Government and regulatory processes	<ul> <li>1.1 Basic bookkeeping/ accounting skills</li> <li>1.2 Communication skills</li> <li>1.3 Building relations with customer and employees</li> <li>1.4 Building competitive advantage of the enterprise</li> </ul>
2. Establish and maintain client-base/market	<ul> <li>2.1 Good customer relations are maintained</li> <li>2.2 New customers and markets are identified, explored and reached out to.</li> <li>2.3 Promotions/Incentives are offered to loyal customers</li> <li>2.4 Additional products and services are evaluated and tried where feasible.</li> <li>2.5 Promotional/advertising initiatives are carried out where necessary and feasible.</li> </ul>	2.1 Public relations concepts 2.2 Basic product promotion strategies 2.3 Basic market and feasibility studies 2.4 Basic business ethics	2.1 Building customer relations 2.2 Individual marketing skills 2.3 Using basic advertising (posters/ tarpaulins, flyers, social media, etc.)
3. Apply budgeting and financial management skills	<ul> <li>3.1 Enterprise is built up and sustained through judicious control of cash flows.</li> <li>3.2 Profitability of enterprise is ensured through appropriate <i>internal controls</i>.</li> <li>3.3 Unnecessary or lower-priority expenses and purchases are avoided.</li> </ul>	<ul> <li>3.1 Cash flow management</li> <li>3.2 Basic financial management</li> <li>3.3 Basic financial accounting</li> <li>3.4 Business internal controls</li> </ul>	3.1 Setting business priorities and strategies 3.2 Interpreting basic financial statements 3.3 Preparing business plans

VARIABLE	RANGE	
1. Business	May include:	
strategies	1.1. Developing/Maintaining niche market	
_	1.2. Use of organic/healthy ingredients	
	1.3. Environment-friendly and sustainable practices	
	1.4. Offering both affordable and high-quality products and services	
	1.5. Promotion and marketing strategies (e. g., on-line marketing)	
2. Business	May include:	
operations	2.1 Purchasing	
	2.2 Accounting/Administrative work	
	2.3 Production/Operations	
3. Internal controls	May include:	
	3.1 Accounting systems	
	3.2 Financial statements/reports	
	3.3 Cash management	
4. Promotional/	May include:	
Advertising	4.1 Use of tarpaulins, brochures, and/or flyers	
initiatives	4.2 Use of social media/Internet	
	4.3 "Service with a smile"	
	4.4 Extra attention to regular customers	

1. Critical aspects	Assessment requires evidence that the candidate :
of competency	1.1. Demonstrated basic entrepreneurial skills
	1.2. Demonstrated ability to conceptualize and plan a
	micro/small enterprise
	1.3. Demonstrated ability to manage/operate a micro/small-
	scale business
2. Resource	The following resources should be provided:
Implications	2.1. Simulated or actual workplace
	2.2. Tools, materials and supplies needed to demonstrate the
	required tasks
	2.3. References and manuals
3. Methods of	Competency in this unit may be assessed through:
Assessment	3.1. Written examination
	3.2. Demonstration/observation with oral questioning
	3.3. Portfolio assessment with interview
	3.4. Case problems
4. Context of	4.1. Competency may be assessed in actual workplace or at
Assessment	the designated TESDA Accredited Assessment Center

#### **COMMON COMPETENCIES**

UNIT OF COMPETENCY: DEVELOP AND UPDATE INDUSTRY KNOWLEDGE

UNIT CODE : UTL9611201

**UNIT DESCRIPTOR**: This unit covers skills and attitude required to apply best

practices used in the industry and share knowledge gained through experience with others in the industry.

	T	ougn experience with others in	ine industry.
ELEMENT	PERFORMANCE CRITERIA  Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Seek information on the industry	<ul> <li>1.1 Sources of information on the industry are correctly identified and accessed.</li> <li>1.2 Information to assist effective work performance is obtained in line with job requirements.</li> <li>1.3 Specific information on sector of work is accessed and updated.</li> <li>1.4 Industry information is correctly applied to dayto-day work activities.</li> </ul>	<ul> <li>1.1 Sources of information for industry updates</li> <li>1.2 Information to assist effective work performance</li> <li>1.3 Verbal and written communication</li> <li>1.4 Interaction with clients</li> <li>1.5 Occupational safety and health standards</li> <li>1.6 RA 9003</li> <li>1.7 RA 6969</li> <li>1.8 Local ordinances</li> <li>1.9 Company policy</li> <li>1.10 Safety-and-health consciousness</li> <li>1.11 Resourcefulness</li> <li>1.12 Diligence</li> <li>1.13 Time-consciousness</li> <li>1.14 Cost-consciousness</li> <li>1.15 Personal integrity in doing routine management practices</li> <li>1.16 Perseverance</li> <li>1.17 Ability to work with others harmoniously</li> </ul>	1.1 Knowing the sources of information on the industry 1.2 Assessing and Updating industry information to effect improved work performance 1.3 Applying industry information to day-to-day work activities 1.4 Practicing communication skills
2. Update industry knowledge	<ul> <li>2.1 Informal and/or formal research is used to update general knowledge of the industry.</li> <li>2.2 Updated knowledge is shared with customers and colleagues as appropriate and incorporated into day-to-day working activities.</li> </ul>	2.1 Updated researches in industry sector 2.2 Verbal and written communication 2.3 Interaction with clients 2.4 Sharing with customers and clients the updated industry information 2.5 Company policy 2.6 Safety- and-health consciousness 2.7 Resourcefulness 2.8 Diligence 2.9 Time-consciousness 2.10 Cost –consciousness 2.11 Perseverance 2.12 Ability to work with others harmoniously	2.1 Updating knowledge on industry through research 2.2 Sharing updated knowledge with colleagues and customers as appropriate 2.3 Practicing communication skills

VARIABLE	RANGE	
1. Sources of	Information sources may include but are not limited to:	
Information	1.1. Media	
	1.2. Reference books	
	1.3. Libraries	
	1.4. Industry association	
	1.5. Industry journals	
	1.6. Internet	
	1.7. Seminars	
	1.8. Forum	
	1.9. Personal observation and experience	
2. Information to	2.1. Different sectors of the industry and the services	
assist effective available in each sector		
work performance	2.2. Relationship between the customer representatives and	
	other personnel	
	2.3. Relationship between the industry and other industries	
	2.4. Industry working conditions	
	2.5. Legislation that affects the industry	
	2.5.1. drugs and liquor	
	2.5.2. health and safety	
	2.5.3. hygiene	
	2.5.4. workers compensation	
	2.5.5. consumer protection	
	2.5.6. building regulations	
	2.6. Industrial relations issues and major organizations	
	2.7. Career opportunities within the industry	
	2.8. Work ethic required to work in the industry and industry	
	expectations of staff quality assurance	

Critical aspects of competency	Assessment requires evidence that the candidate:  1.1. Knew key sources of information on the industry  1.2. Updated industry knowledge  1.3. Accessed and used industry information
2. Resource implications	The following resources should be provided:  2.1. Sources of information on the industry  2.2. Industry knowledge
3. Methods of assessment	Competency may be assessed through: 3.1. Interview/questions 3.2. Practical demonstration 3.3. Portfolio of industry information related to trainee's work
Context of assessment	4.1. Competency may be assessed individually in the workplace or in a simulated workplace setting.

UNIT OF COMPETENCY: PERFORM WORKPLACE SECURITY AND SAFETY

**PRACTICES** 

UNIT CODE : UTL9611202

UNIT DESCRIPTOR : This unit of competency deals with the knowledge, skills

and attitudes in following health, safety and security practices. It includes dealing with emergency situations and maintaining safe personal presentation standards.

	PERFORMANCE CRITERIA	REQUIRED	REQUIRED
ELEMENT	Italicized terms are elaborated in the Range of Variables	KNOWLEDGE	SKILLS
1. Follow workplace procedures for health, safety and security practices	<ul> <li>1.1 Correct health, safety and security procedures are followed in line with legislation and enterprise procedures</li> <li>1.2 Breaches of health, safety and security procedures are identified and reported in line with enterprise procedure.</li> <li>1.3 Suspicious behavior or unusual occurrences are reported in line with enterprise procedure.</li> </ul>	1.1 Correct health, safety and security procedures 1.2 Types of breaches of health, safety and security procedures 1.3 Verbal and written communication 1.4 Interaction with clients 1.5 Personal Safety Equipment 1.6 Work hazards 1.7 Codes and Regulations 1.8 Occupational safety and health standards 1.9 RA 9003 1.10 RA 6969 1.11 Local ordinances 1.12 Safety-and-health consciousness 1.13 Resourcefulness 1.14 Diligence 1.15 Time-consciousness 1.16 Cost -consciousness 1.17 Perseverance 1.18 Ability to work with others harmoniously	1.1 Knowing the sources of information on the industry 1.2 Assessing and updating industry information to effect improved work performance 1.3 Applying industry information to day-to-day work activities 1.4 Practicing communication skills
2. Deal with emergency situations	<ul> <li>2.1. <i>Emergency</i> and potential emergency situations are recognized and appropriate actions are taken within individual's scope of responsibility.</li> <li>2.2. Emergency procedures are followed in line with enterprise procedures.</li> <li>2.3. Assistance is sought from colleagues to resolve or respond to emergency situation.</li> <li>2.4. Details of emergency situations are reported in line with enterprise procedures.</li> </ul>	2.1 Types of emergency situations and procedures 2.2 Verbal and written communication 2.3 Interaction with clients 2.4 Personal Safety Equipment 2.5 Work hazards 2.6 Occupational safety and health standards 2.7 RA 9003 2.8 RA 6969 2.9 Local ordinances 2.10 Safety- and- health consciousness 2.11 Resourcefulness 2.12 Diligence 2.13 Time-consciousness	<ul> <li>2.1 Practicing intra and interpersonal skills</li> <li>2.2 Applying appropriate actions to emergencies</li> <li>2.3 Reporting emergency situations</li> </ul>

ELEMENT	PERFORMANCE CRITERIA  Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		2.14 Cost-consciousness 2.15 Perseverance 2.16 Ability to work with others harmoniously	
3. Maintain safe personal presentation standards	3.1 Safe personal standards are identified and followed in line with enterprise requirements.	3.1 Types of emergency situations and procedures 3.2 Personal safety standards 3.3 Verbal and written communication 3.4 Interaction with clients 3.5 Personal Safety Equipment 3.6 Work hazards 3.7 Occupational safety and health standards 3.8 RA 9003 3.9 RA 6969 3.10 Local ordinances 3.11 Safety- and-health consciousness 3.12 Resourcefulness 3.13 Diligence 3.14 Time -consciousness 3.15 Cost -consciousness 3.16 Perseverance 3.17 Ability to work with others harmoniously	3.1 Practicing intra and interpersonal skills 3.2 Following appropriate safety personal standards

VARIAE	BLE	RANGE
1 Health, Safety Security Proc	1.1 1.2 1.3 1.4 1.5 1.6 1.7	Manual handling including lifting, transferring Safe handling of chemicals, poisons and dangerous materials Ergonomically sound furniture and workstations Emergency fire and accident Hazard identification and control Security of documents, cash, equipment, people
2 Breaches of F	2.1 2.2 2.3 2.4 2.5 2.6 2.7	9 1 1
3 Emergency	3.1 3.2 3.3 3.4 3.5	r include but is not limited to: Personal injuries Fire Electrocution Natural calamity i.e. earthquake/flood Criminal acts i.e. robbery Bomb

1	Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Complied with industry practices and procedures 1.2 Used interactive communication with others 1.3 Complied with workplace safety, security and hygiene practices 1.4 Identified faults and problems and the necessary corrective action
		<ul><li>1.5 Promoted public relation among others</li><li>1.6 Complied with quality standards</li></ul>
		1.7 Responded to emergency situations in line with enterprise guidelines
		1.8 Complied with proper dress code
2	Resource implications	The following resources should be provided: 2.1 Procedures manual on safety, security, health and emergency 2.2 Availability of tools, equipment, supplies and materials
3	Methods of assessment	Competency may be assessed through: 3.1 Written examination 3.2 Practical demonstration 3.3 Interview
4	Context of assessment	4.1 Competency may be assessed in the work place or in a simulated work place setting.

UNIT OF COMPETENCY: MAINTAIN ENVIRONMENTAL HEALTH AND

**AWARENESS IN THE WORKPLACE** 

UNIT CODE : UTL9611203

**UNIT DESCRIPTOR**: This unit of competency deals with the knowledge, skills

and attitudes in maintaining environmental health and awareness in the workplace. It includes dealing with environmental risks and hazards, emergency situations

and maintaining self-personal living standards.

ELEMENT	PERFORMANCE CRITERIA  Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify environmental risks and hazards in the work place	<ul> <li>1.1. Proper procedures are followed in line with company and enterprise procedures</li> <li>1.2. Breaches of environmental safety and security procedures are identified and reported in line with enterprise procedure.</li> <li>1.3. Suspicious workplace conditions or unusual occurrences that are potential risks or hazards are reported in line with enterprise procedure.</li> </ul>	<ul> <li>1.1. Correct waste collection and hauling procedures to assure environmental health and safety</li> <li>1.2. Identify types of breaches of health, safety and operational procedures that endanger environmental health</li> <li>1.3. Types of wastes and their characteristics and effects on the environment</li> <li>1.4. Ways that different waste affect the environment</li> <li>1.5. Reasons for correct/proper use of PPEs.</li> <li>1.6. Verbal and written communication</li> <li>1.7. Interaction with clients</li> <li>1.8. Personal Safety Equipment</li> <li>1.9. Work hazards</li> <li>1.10. Occupational safety and health standards</li> <li>1.11. RA 9003</li> <li>1.12. RA 6969</li> <li>1.13. Clean Air Act</li> <li>1.14. Clean Water Act</li> <li>1.15. Other Laws</li> <li>1.16. Local ordinances</li> <li>1.17. Safety-and-health consciousness</li> <li>1.18. Resourcefulness</li> <li>1.19. Diligence</li> <li>1.20. Time-consciousness</li> <li>1.21. Cost -consciousness</li> <li>1.22. Perseverance</li> <li>1.23. Ability to work with others harmoniously</li> </ul>	1.1. Identifying environmental risks and hazards in the work place 1.2. Understanding and following the proper procedures 1.3. Identifying and reporting breaches of environmental safety and security procedures 1.4. Reporting suspicious workplace conditions or unusual occurrences that are potential risks of hazards 1.5. Practicing communication skills 1.6. Writing report

ELEMENT	PERFORMANCE CRITERIA  Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Formulate mitigation measures to eliminate the environmental risks and hazards in the work place  3. Implement	<ul> <li>2.1. Proper procedures are followed in line with company and enterprise procedures</li> <li>2.2. Breaches of environmental safety and security procedures are identified and reported in line with enterprise procedure.</li> <li>2.3. Suspicious workplace conditions or unusual occurrences that are potential risks or hazards are reported in line with enterprise procedure.</li> <li>3.1. Proper procedures are</li> </ul>	<ul> <li>2.1. Correct waste collection and hauling procedures to assure environmental health and safety</li> <li>2.2. Identify types of breaches of health, safety and operational procedures that endanger environmental health</li> <li>2.3. Types of wastes and their characteristics and effects on the environment</li> <li>2.4. Ways that different waste affects the environment.</li> <li>2.5. Reasons for correct/proper use of PPEs.</li> <li>2.6. Verbal and written communication</li> <li>2.7. Interaction with clients</li> <li>2.8. Personal Safety Equipment</li> <li>2.9. Work hazards</li> <li>2.10. Occupational safety and health standards</li> <li>2.11. RA 9003</li> <li>2.12. RA 6969</li> <li>2.13. Clean Air Act</li> <li>2.14. Clean Water Act</li> <li>2.15. Other Laws</li> <li>2.16. Local ordinances</li> <li>2.17. Safety-and-health consciousness</li> <li>2.21. Cost -consciousness</li> <li>2.22. Perseverance</li> <li>2.23. Ability to work with others harmoniously</li> <li>3.1 Correct waste collection</li> </ul>	2.1 Formulating mitigation measures to eliminate environmental risks and hazards in the work place 2.2 Understanding and following the proper procedures 2.3 Identifying and reporting breaches of environmental safety and security procedures 2.4 Reporting suspicious workplace conditions or unusual occurrences that are potential risks or hazards 2.5 Practicing communication skills 2.6 Writing reports
mitigation measures to eliminate the environmental risks and hazards in the work place	followed in line with company and enterprise procedures  3.2. Breaches of environmental safety and security procedures are identified and reported in line with enterprise procedure.	and hauling procedures to assure environmental health and safety  3.2 Identify types of breaches of health, safety and operational procedures that endanger environmental health	mitigation measures to eliminate environmental risks and hazards in the work place

ELEMENT	PERFORMANCE CRITERIA  Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	3.3. Suspicious workplace conditions or unusual occurrences that are potential risks or hazards are reported in line with enterprise procedure	3.3 Types of wastes and their characteristics and effects on the environment 3.4 Ways that different waste affects the environment. 3.5 Reasons for correct/proper use of PPEs. 3.6 Verbal and written communication 3.7 Interaction with clients 3.8 Personal Safety Equipment 3.9 Work hazards 3.10 Occupational safety and health standards 3.11 RA 9003 3.12 RA 6969 3.13 Clean Air Act 3.14 Clean Water Act 3.15 Other Laws 3.16 Local ordinances 3.17 Safety- and -health consciousness 3.18 Resourcefulness 3.19 Diligence 3.20 Time-consciousness 3.21 Cost -consciousness 3.22 Perseverance 3.23 Ability to work with others harmoniously	3.2 Understanding and following the proper procedures 3.3 Identifying and reporting breaches of environmental safety and security procedures 3.4 Reporting suspicious workplace conditions or unusual occurrences that are potential risks of hazards 3.5 Practicing communication skills 3.6 Writing reports

# **RANGE OF VARIABLES**

VARIABLE	RANGE
Environmental risks and hazards	<ul> <li>May include but are not limited to:</li> <li>1.1 Physical hazards – impact, illumination, pressure, noise, vibration, temperature, radiation</li> <li>1.2 Biological hazards- bacteria, viruses, plants, parasites, mites, molds, fungi, insects</li> <li>1.3 Chemical hazards – dusts, fibers, mists, fumes, smoke, gases, vapors</li> <li>1.4 Ergonomics <ul> <li>1.4.1 Psychological factors – over exertion/excessive force, awkward/static positions, fatigue, direct pressure, varying metabolic cycles</li> <li>1.4.2 Physiological factors – monotony, personal relationship, work out cycle</li> </ul> </li> <li>1.5 Presence of un-qualified and/or untrained persons in the workplace</li> </ul>
2. Proper procedures	May include but are not limited to: 2.1 The operational activity flows used in the job. 2.2. Use of personal protective clothing and equipment 2.3 The proper checking of equipment and tools before use 2.4 Safe posture including sitting, standing, bending 2.5 Manual handling of waste including lifting, transferring and stowing the waste in proper order 2.6 Emergency fire and accident 2.7 Hazard identification and control 2.8 Proper procedures in handling waste accidents and/or spillage
3. Breaches	May include but is not limited to: 3.1 Continued use and/or operation of wrong and/or malfunctioning tools and equipment 3.2 Presence of un-qualified and/or untrained persons within the work area 3.3 Unsafe containment of waste. 3.4 Improper system of operations in collection and hauling of waste 3.5 Lack of suitable signage when required 3.6 Lack of training on health and safety issues 3.7 Unsafe work practices

1. Critical Aspects of	Assessment requires evidence that the candidate:
Competency	1.1 Complied with industry and company practices and procedures
	1.2 Used interactive communication with others
	1.3 Complied with workplace safety, security and hygiene practices
	1.4 Identified faults and problems and the necessary corrective action
	1.5 Maintained environmental health in the workplace
2. Resource	The following resources should be provided:
Implications	2.1 Procedures manual on safety, security, health and
	emergency
	2.2 Availability of tools, equipment, supplies and materials
	2.3 Availability of PPEs
3. Methods of	Competency may be assessed through:
assessment	3.1 Written examination
	3.2 Practical demonstration
	3.3 Interview
4. Context of	4.1 Competency may be assessed in the work place or in
assessment	a simulated work place setting.

### **CORE COMPETENCIES**

UNIT OF COMPETENCY: PLAN SOLID WASTE MANAGEMENT ACTIVITIES

UNIT CODE : CS-UTL325303

**UNIT DESCRIPTOR**: This unit covers the knowledge, skills and attitudes in

planning solid waste management activities. This includes competencies in performing planning, conducting preoperation and coordinating waste management activities.

ELI	EMENT	PERFORMANCE CRITERIA Italicized fonts are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	erform anning tivity	<ul> <li>1.1. Flowchart is prepared based on the solid waste management activities *</li> <li>1.2. Solid waste management activities are scheduled according to the project timeline and scope of work</li> <li>1.3. Required resources are identified based on the flowchart activity *</li> <li>1.4. Work instructions are prepared according to the program activity</li> </ul>	<ul> <li>1.1 Preparation of flowchart</li> <li>1.2 Operation procedures</li> <li>1.3 Timelines</li> <li>1.4 Computation of operation cost (labor, equipment &amp; material)</li> <li>1.5 Overview of Guidelines on: <ul> <li>1.5.1 Sanitary Landfill Operations</li> <li>1.5.2 MRF operations</li> <li>1.5.3 Co-processing operation</li> <li>1.5.4 Composting operation</li> <li>1.5.5 Recycling operation</li> <li>1.6 R.A. 9003 and its IRR, as amended</li> <li>1.7 R.A. 6969</li> <li>1.8 Guidelines on Waste to Energy</li> <li>1.9 DAO 2010-06</li> <li>1.10 P.D. 1586 and its IRR</li> <li>1.11 MRF Guidelines</li> <li>1.12 Waste Analysis and Characterization Study (WACS)</li> <li>1.13 Environmental Law and IRRs</li> <li>1.14 Recommended recyclables sorting guide of the National Solid Waste Management Commission</li> </ul> </li> </ul>	1.1. Preparing flowchart 1.2. Scheduling activities 1.3. Identifying required resources 1.4. Preparing work instruction 1.5. Administrative skills 1.6. Communication skills 1.7. Documentation skills 1.8. Estimating cost
ope	enduct pre- eration tivity	2.1. <i>Instructions</i> from the top management are secured according to company procedures *	<ul><li>2.1. Company instructions, policies and procedures</li><li>2.2. Manual of operations</li></ul>	2.1. Securing instructions 2.2. Preparing and securing

ELEMENT	PERFORMANCE CRITERIA Italicized fonts are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	<ul> <li>2.2. Pre-operation permitting requirements are prepared and secured *</li> <li>2.3. Operational cost estimate is prepared for specific projects *</li> </ul>	<ul> <li>2.3. Procurement procedures - P.D. 9184 and its IRR</li> <li>2.4. R.A. 9003 and its IRR, as amended</li> <li>2.5. R.A. 6969</li> <li>2.6. Guidelines on Waste to Energy</li> <li>2.7. DAO 2010-06</li> <li>2.8. P.D. 1586 and its IRR</li> <li>2.9. MRF Guidelines</li> <li>2.10. Permitting requirements</li> <li>2.11. Procedural manual</li> <li>2.12. Design engineering development plan</li> <li>2.13. Manual of operation</li> <li>2.14. Cost engineering procedures</li> <li>2.15. Monitoring plan</li> <li>2.16. Environmental Law and IRRs</li> </ul>	permitting requirements 2.3. Preparing cost estimates 2.4. Administrative skills 2.5. Technical skills 2.6. Communication skills 2.7. Documentation skills 2.8. Decision making skills 2.9. Estimating skills
3. Coordinate waste management activities	<ul> <li>3.1. Issued policy, procedures, guidelines and standards are disseminated based on operational requirements *</li> <li>3.2. Coordination with stakeholders is done according to plan</li> <li>3.3. Coordination with other supervisors is conducted based on workplace procedures</li> <li>3.4. Established waste collection routes are executed based on workplace procedures</li> </ul>	<ul> <li>3.1. Procedural manual</li> <li>3.2. operations manual</li> <li>3.3. Stakeholders relationship management plan</li> <li>3.4. Communication plan</li> <li>3.5. Corporate social responsibility (CSR) policies</li> <li>3.6. Environmental Laws and IRRs</li> <li>3.7. Guidelines on Waste to Energy</li> </ul>	3.1. Disseminating issued policies 3.2. Coordinating with stakeholders 3.3. Coordinating with other supervisors 3.4. Administrative skills 3.5. Executing established collection routes 3.6. Technical skills 3.7. Communication skills 3.8. Documentation skills 3.9. Troubleshooting skills 3.10.Decision making skills

# **RANGE OF VARIABLES**

VARIABLE	RANGE	
Solid waste     management     activities	May include: 1.1. sanitary landfill operation 1.2. collection and hauling operation 1.3. composting operation 1.4. recycling operation 1.5. co-processing facility operation 1.5.1. waste to energy facility operation 1.6. MRF operation (LGU & Private sector) 1.7. transfer station operation 1.8. conduct of WACS 1.9. analyzing results of WACS	
2. resources	May include: 2.1. workforce 2.2. equipment 2.3. budget 2.4. supplies and materials	
3. instructions	May include: 3.1. Memo / order / circular 3.2. Standard operating procedure 3.3. Project plan 3.4. Instruction manual 3.5. electronic instructions through i.e. emails, messaging	
Pre-operation permitting requirements	apps, online meeting platforms, etc.  Includes but is not limited to: 4.1. permits and tools 4.2. design 4.3. site development plan 4.3.1. electrical 4.3.2. mechanical 4.3.3. structural	
5. Operational cost estimates	May include: 5.1. workforce 5.2. supplies and materials 5.3. equipment 5.4. logistics	
6. Stakeholders	May include: 6.1. internal- 6.1.1. sections 6.1.2. divisions 6.2. external 6.2.1. LGUs (Province/City/Municipalities/Barangay) 6.2.2. National	

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1. Performed planning activity 1.1.1. Prepared flowchart based on the solid waste management activities 1.1.2. Scheduled solid waste management activities according to the project timeline and scope of work 1.1.3. Identified required resources based on the flowchart activity	
	1.2. Conducted pre-operation activity     1.2.1. Secured instructions from the top management according to company procedures     1.2.2. Prepared and secured pre-operation permitting requirements     1.2.3. Prepared operational cost estimate for specific projects	
	<ul> <li>1.3. Coordinated waste management activities</li> <li>1.3.1. Disseminated issued policy, procedures, guidelines and standards based on operational requirements</li> <li>1.3.2. Done coordination with stakeholders according to plan</li> <li>1.3.3. Conducted coordination with other supervisors based on workplace procedures</li> <li>1.3.4. Executed waste collection routes based on workplace procedures</li> </ul>	
2. Resource Implications	The following resources <b>MUST</b> be provided: 2.1. Applicable tools and equipment 2.2. Appropriate materials relevant to the proposed activity 2.3. Actual workplace or simulated assessment area 2.4. Manual of operation 2.5. Manufacturer's manual	
3. Methods of Assessment	Competency must be assessed through: 3.1. Direct observation / demonstration with oral questioning 3.2. Written test 3.3. Portfolio	
4. Context for Assessment	4.1. Competency may be assessed in actual workplace or at the designated TESDA Accredited Assessment Center	

# UNIT OF COMPETENCY: SUPERVISE SOLID WASTE MANAGEMENT ACTIVITIES

UNIT CODE : CS-UTL325304

UNIT DESCRIPTOR

: This unit covers the knowledge, skills and attitudes in supervising solid waste management activities. This includes competencies in operationalizing waste management activities, ensuring compliance with waste legislative regulations and proposing improvement on waste management activities.

	ELEMENT	PERFORMANCE CRITERIA Italicized fonts are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1.	Operationalize waste management activities	<ul> <li>1.1. Waste management activities are directed to subordinates based on required actions to be undertaken *</li> <li>1.2. Materials to be acquired are requested based on the operational requirements *</li> <li>1.3. Waste management program and activities are executed based on plan *</li> <li>1.4. Day to day activity on waste management operation is supervised according to the work program *</li> <li>1.5. Records are maintained following workplace procedure.</li> <li>1.6. Queries and complaints are responded with reference to industry rules and guidelines.</li> </ul>	1.1. Waste management activities 1.2. Permitting requirements 1.3. Procedural manual/Manual of operation 1.4. Design engineering development plan 1.4.1. Materials 1.4.2. Budget 1.5. Cost engineering procedures 1.6. Monitoring plan 1.7. Industry rules and guidelines 1.8. Recommended recyclables sorting guide of the National Solid Waste Management Commission	1.1. directing subordinates 1.2. Inventory skills 1.3. Executing waste management program and activities 1.4. Supervision skills 1.5. Administrative skills 1.6. Technical skills 1.7. Communication skills 1.8. Documentation skills 1.9. Troubleshooting skills 1.10. Decision making skills
2.	Ensure compliance with waste legislative regulations	2.1. Company procedures for the collection, transport, transfer, recovery, treatment and disposal of waste is implemented in compliance with all regulations and legal requirements.*  2.2. Company procedures for the collection, transport, transfer, recovery, treatment and disposal of waste is monitored in compliance with all regulations and legal requirements.*	2.1. Company policies and procedures for the collection, transport, transfer, recovery, treatment and disposal of waste 2.2. regulations and legal requirements 2.3. Manual of operations 2.4. Environmental laws and IRRs	2.1. Implementing company procedures for the collection, transport, transfer, recovery, treatment and disposal of waste 2.2. Monitoring company procedures for the collection, transport, transfer, recovery, treatment and disposal of waste

	ELEMENT	PERFORMANCE CRITERIA Italicized fonts are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		2.3. <b>Reports</b> and other documents are submitted following regulations and legal requirements		2.3. Submitting reports and other documents 2.4. Administrative skills 2.5. Technical skills 2.6. Communication skills 2.7. Documentation skills
3.	Propose improvement on waste management activities	<ul> <li>3.1. Records on waste management activities are summarized according to work requirements</li> <li>3.2. Recommendations for continual improvement is prepared according to workplace procedure*</li> <li>3.3. Report on improvement is prepared and submitted following organizational requirements.*</li> <li>3.4. Recommendation for change is prepared in case of conflicting policy</li> </ul>	3.1. Company policies and procedures 3.2. Manual of operations 3.3. Report preparation 3.4. Solid waste management plan 3.5. New, Unique, Difficult, Different (NUDD) framework 3.6. Current available monetization points for recyclable materials in the vicinity of the site	3.1. Summarizing records 3.2. Preparing recommendations for continual improvement 3.3. Preparing and submitting reports 3.4. Administrative skills 3.5. Technical skills 3.6. Communication skills 3.7. Documentation skills 3.8. Decision making skills

# **RANGE OF VARIABLES**

VARIABLE	RANGE		
1. Subordinates	May include: 1.1. team leaders 1.2. foreman 1.3. operators 1.4. waste workers 1.5. administrative personnel		
Regulations and legal requirements	May includes: 2.1. Environmental Compliance Certificate 2.2. Certificate of non-coverage 2.3. Business permit (LGU requirements) 2.4. LLDA clearance 2.5. Discharge permit (LLDA and EMB) 2.6. Shore land permit (LLDA) 2.7. Permit To Operate (PTO) of EMB DENR 2.8. Hazardous waste generator/treater IDs		
3. Reports	May include: 3.1. Self-monitoring report 3.2. Compliance monitoring report 3.3. Health and safety report 3.4. Environmental Compliance Audit		

	,
1. Critical aspects of competency	Assessment requires evidence that the candidate:  1.1. Operationalized waste management activities  1.1.1. Directed waste management activities to subordinates based on required actions to be undertaken  1.1.2. Requested materials to be acquired based on the operational requirements  1.1.3. Executed waste management program and activities based on plan  1.1.4. Supervised day to day activity on waste management operation according to the work program  1.2. Oversee waste management activities within an organization or community  1.2.1. Implemented company procedures for the collection,
	transport, transfer, recovery, treatment and disposal of waste in compliance with all regulations and legal requirements.  1.2.2. Monitored company procedures for the collection, transport, transfer, recovery, treatment and disposal of waste in compliance with all regulations and legal requirements.
	Propose improvement on waste management activities     1.3.1. Prepared recommendations for continual improvement according to workplace procedure     1.3.2. Prepared and submitted report on improvement following organizational requirements
2. Resource Implications	The following resources <b>MUST</b> be provided: 2.1. Applicable tools and equipment 2.2. Appropriate materials relevant to the proposed activity 2.3. Actual workplace or simulated assessment area 2.4. Manual of operation 2.5. Manufacturer's manual
3. Methods of Assessment	Competency must be assessed through: 3.1. Direct observation / demonstration with oral questioning 3.2. Written test 3.3. Portfolio
Context for     Assessment	4.1. Competency may be assessed in actual workplace or at the designated TESDA Accredited Assessment Center

UNIT OF COMPETENCY: SUPERVISE STAFF IN SOLID WASTE MANAGEMENT **OPERATION** 

**UNIT CODE** : CS-UTL325305

**UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes in

> supervising staff in solid waste management operation. This includes competencies in supervising work, evaluating

performance of employees and guiding employees.

	1	T	<u> </u>
ELEMENT	PERFORMANCE CRITERIA Italicized fonts are elaborated in the Range of Variables	nts are elaborated in	
1. Supervise work	<ul> <li>1.1. Assigning of work to employees is done based on work plan *</li> <li>1.2. Work and activities of employees are scheduled according to the work plan*</li> <li>1.3. Work instructions are given to employees as per work plan *</li> <li>1.4. Day-to-day activities on waste management operations are directed according to work plan *</li> <li>1.5. Leave requests are approved according to organizational procedures/company policies.</li> <li>1.6. Worker's safety is coordinated according to the organizational safety plan.*</li> <li>1.7. Irregularities in the workplace are addressed following organizational procedures.</li> </ul>	1.1. Work plan 1.2. Organizational/ Company policies 1.3. Employees handbook 1.4. CSC/ DOLE Guidelines 1.5. Operation procedures 1.6. Work instructions 1.7. Workforce schedule 1.8. Guidelines on: 1.1.1. Sanitary Landfill Operations 1.1.2. MRF operations 1.1.2. MRF operations 1.1.3. Co-processing operation 1.1.4. Composting operation 1.1.5. Recycling operation 1.1.5. Recycling operation 1.1.6. RA. 9003 and its IRR, as amended 1.10. R.A. 6969 1.11. Guidelines on Waste Energy 1.12. DAO 2010-06 1.13. P.D. 1586 and its IRR 1.14. MRF Guidelines 1.15. Environmental Law 1.16. RA 11058 and its IRR (OSHS)	<ul> <li>1.1. Assigning of works</li> <li>1.2. Scheduling of works</li> <li>1.3. Giving work instructions</li> <li>1.4. Directing daytoday activities</li> <li>1.5. Approving leave requests</li> <li>1.6. Supervising worker's safety</li> <li>1.7. Addressing irregularities</li> <li>1.8. Facilitating toolbox meeting</li> <li>1.9. Administrative skills</li> <li>1.10. Technical skills</li> <li>1.11. Communication skills</li> <li>1.12. Documentation skills</li> <li>1.13. Troubleshooting skills</li> <li>1.14. Decision making skills</li> </ul>
Evaluate     performance     of employees	2.1. Employee's     performance are     monitored according to     organizational     procedures *  2.2. Performance evaluation     form is accomplished     according to     organizational     procedures.*  2.3. Accomplishments     relative to work	2.1. Organizational/ Company policies 2.2. Employees handbook 2.3. CSC/ DOLE Guidelines 2.4. Performance evaluation 2.5. Accomplishment of performance evaluation form 2.6. Feedbacking	2.1. Monitoring employee's performance 2.2. Accomplishing performance evaluation form 2.3. Reviewing accomplishments 2.4. Providing feedbacks 2.5. Administrative skills

ELEMENT	PERFORMANCE CRITERIA Italicized fonts are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	assigned are reviewed according to organizational procedures  2.4. Feedbacks are provided to employees for improvement according to organizational procedures*		2.6. Technical skills 2.7. Communication skills 2.8. Documentation skills 2.9. Troubleshooting skills 2.10. Decision making skills
3. Guide employees	<ul> <li>3.1. Employees are mentored based on organizational procedures*</li> <li>3.2. Employees are coached based on organizational procedures*</li> <li>3.3. Employees are counseled based on organizational procedures*</li> <li>3.4. Newly hired or transferred employees are oriented based on organizational procedures*</li> <li>3.5. Conflicts among employees are reported according to the organizational process.</li> </ul>	3.1. Mentoring procedures 3.2. Coaching 3.3. Career counseling 3.4. Organizational procedures 3.5. Employees handbook 3.6. CSC/ DOLE Guidelines 3.7. Company handbook 3.8. Workplace conflict resolution	3.1. Matching mentors to employees 3.2. Coaching employees 3.3. Counseling employees 3.4. Orienting newly hired or transferred employees 3.5. Reporting conflicts 3.6. Administrative skills 3.7. Technical skills 3.8. Communication skills 3.9. Documentation skills 3.10. Decision making skills

# **RANGE OF VARIABLES**

VARIABLE	RANGE
1. Feedbacks	May include: 1.1. Verbal 1.2. Non-verbal
2. Irregularities	May include but not limited to: 2.1. Burglary 2.2. Violations 2.3. Pilferage 2.4. Drinking alcohol 2.5. Smoking in prohibited areas 2.6. Gambling

4 Critical caracta	A consequent was vive a suid as a sthat the considers.			
Critical aspects	·			
of competency	1.1. Supervised work			
	1.1.1. Done assigning of work to employees based on work plan			
	1.1.2. Scheduled work and activities of employees according to			
	the work plan			
	1.1.3. Gave work instructions to employees as per work plan			
	1.1.4. Directed day-to-day activities on waste management			
	operations according to work plan			
	1.1.5. Coordinated worker's safety according to the			
	organizational safety plan			
	1.2. Evaluated performance of employees			
	1.2.1. Monitored employee's performance according to			
	organizational procedures			
	1.2.2. Accomplished performance evaluation form is			
	accomplished according to organizational procedures			
	1.2.3. Provided feedbacks to employees for improvement			
	according to organizational procedures			
	1.3. Guided employees			
	1.3.1. Mentored employees based on organizational procedures			
	1.3.2. Coached employees based on organizational procedures			
	1.3.3. Counseled employees based on organizational procedures			
	(include correcting mistakes)			
	1.3.4. Oriented newly hired or transferred employees based on			
	organizational procedures			
2. Resource	The following resources <b>MUST</b> be provided:			
Implications	2.1. Appropriate supplies and materials			
	2.2. Applicable tools and equipment			
	2.3. Appropriate materials relevant to the proposed activity			
	2.4. Workplace or assessment area			
	2.5. Drawings and specifications relevant to the task			
	2.6. Manufacturer's manual			
<ol><li>Methods of</li></ol>	Competency must be assessed through:			
Assessment	3.1. Direct observation / demonstration with oral questioning			
	3.2. Written test			
4. Context for	4.1. Competency may be assessed in actual workplace or at the			
Assessment	designated TESDA Accredited Assessment Center			

# SECTION 3. TRAINEE ENTRY REQUIREMENTS, TRAINER'S QUALIFICATIONS, LIST OF TOOLS, EQUIPMENT AND MATERIALS, & TRAINING FACILITIES

# 3.1. TRAINEE ENTRY REQUIREMENTS FOR SOLID WASTE MANAGEMENT OPERATION LEVEL III

The trainees who wish to enter the course should possess the following requirements:

- Must have completed basic education or an alternative learning systems (ALS) certificate of completion with grade 10 equivalent holder AND with at least 1 year of relevant waste management experience.
- Must be able to communicate both orally and in writing
- Must be able to perform basic mathematical computations
- Must be able to perform basic computer operations.

OR

- Must have at least 2 years of relevant waste management experience AND have at least 45 hours of relevant training.
- Must be able to communicate both orally and in writing
- Must be able to perform basic mathematical computations
- Must be able to perform basic computer operations.

This list does not include specific institutional requirements such as educational attainment, appropriate work experience, and others that may be required of the trainees by the school or training center delivering the TVET program.

# 3.2. TRAINER'S QUALIFICATIONS FOR SOLID WASTE MANAGEMENT OPERATION LEVEL III

- Must be a holder of Trainer's Methodology Certificate (TMC) Level I OR must have training of trainer's certificate OR must be a practicing trainer for two (2) years within the last five (5) years;
- Must have at least 3 years relevant waste management industry experience within the last five (5) years OR a total of 120 hours industry immersion within the last five (5) years;

# 3.3. LIST OF TOOL, EQUIPMENT AND MATERIALS

Recommended list of tools, equipment and materials for the training of a maximum of 25 trainees for **Solid Waste Management Operation Level III** are as follows:

TOOLS		EQUIPMENT			MATERIALS	
QTY.	ITEM	QTY.	ITEM	QTY.	ITEM	
25	Mask (surgical)					
1	Safety shoes (steel-toe/sole)	1 unit	Fire Extinguishers	5	Marking Pens	
25	Hardhats	1	Laptop	2	White Boards/ Blackboard	
25	Cloth Gloves with rubber linings	1	Projector Screen	3	Whiteboard Markers/Chalk	
1	PPE Mask	1	LCD Projector	2	Whiteboard / Blackboard Erasers	
		1	Sound System (microphone, amplifier, speaker system)	1 set	Waste classification gallery	
				1 set	Scale model/ cross-section SLF in 4 categories	
				Tra	ining Materials:	
				Ecolo Mana 2000 Repu Toxio Wasi Tech Solid Desig Mana Guid	ublic Act 6969 – c and Hazardous te nical Guidebook on Wastes Disposal gn Operation & agement ebook for Safe ure of Disposal	
					Operations Manual	
				_	douts/ Pop sheets	
					r relevant waste agement materials	

#### 3.4. TRAINING FACILITIES

The areas indicated here are indicative for a class size of 25 students/trainees. For a smaller class size, they may be reduced, provided that there should be at least 1.0 sq. m. or more space per trainee.

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
Lecture Area	8 x 5 m	40 sq. meter	40 sq. meter
Learning Resource Area	8 x 5 m	40 sq. meter	40 sq. meter
Facilities/Equipment/			30 sq. meter
Circulation Area			-
Wash Area and Toilet			30 sq. meter
		Total workshop	140+ sq. meter
		area	
for SLF (own or access to)	Category 3	(per DENR	(per DENR
	(minimum)	approved design)	approved design)
for MRF		(per DENR	(per DENR
		approved design)	approved design)

#### Subject to conformity of the health and safety protocols

NOTE: Access to and use of tools, equipment, materials and facilities can be provided through cooperative arrangements or MOA with other partner-companies

#### **GLOSSARY OF TERMS**

#### **GENERAL**

- 1) Basic Competencies are the skills and knowledge that everyone needs for work
- 2) **Common Competencies** are the skills and knowledge needed by all people working in a particular industry or sector
- 3) **Competency** is the possession and application of knowledge, skills and attitudes to perform work activities to the standard expected in the workplace
- 4) **Competency Standards (CS)** is the industry-determined specification of competencies required for effective work performance
- 5) **Context of Assessment** refers to the place where assessment is to be conducted or carried out
- 6) **Core Competencies -** are the specific skills and knowledge needed in a particular area of work industry sector/occupation/job role
- 7) **Critical aspects of competency -** refers to the evidence that is essential for successful performance of the unit of competency
- 8) **Elective Competencies -** are the additional skills and knowledge required by the individual or enterprise for work
- 9) **Elements** are the building blocks of a unit of competency. They describe in outcome terms the functions that a person performs in the workplace
- 10) Evidence Guide is a component of the unit of competency that defines or identifies the evidences required to determine the competence of the individual. It provides information on critical aspects of competency, resource implications, assessment method and context of assessment
- 11) **Level -** refers to the category of skills and knowledge required to do a job
- 12) Method of Assessment refers to the ways of collecting evidence and when evidence should be collected
- 13) **Performance Criteria** are evaluative statements that specify what is to be assessed and the required level of performance
- 14) Qualification is a cluster of units of competencies that meets job roles and are significant in the workplace. It is also a certification awarded to a person on successful completion of a course in recognition of having demonstrated competencies in an industry sector
- 15) Range of Variables describes the circumstances or context in which the work is to be performed

- 16) Resource Implications refers to the resources needed for the successful performance of the work activity described in the unit of competency. It includes work environment and conditions, materials, tools and equipment.
- 17) **TMC** Trainer's Methodology Course
- 18) **TVET** refers to technical vocational education and training
- 19) **Unit of Competency** is a component of the competency standards stating a specific key function or role in a particular job or occupation; it is the smallest component of achievement that can be assessed and certified under the Philippine TVET Qualification Framework (PTQF)

#### **SECTOR SPECIFIC**

- Agricultural waste shall refer to waste generated from planting or harvesting of crops, trimming or pruning of plants and wastes or run-off materials from farms or fields;
- 2) Bulky wastes shall refer to waste materials which cannot be appropriately placed in separate containers because of either its bulky size, shape or other physical attributes. These include large worn-out or broken household, commercial, and industrial items such as furniture, lamps, bookcases, filing cabinets, and other similar items;
- Buy-back center shall refer to a recycling center that purchases or otherwise accepts recyclable materials from the public for the purpose of recycling such materials;
- 4) **CNC** Certificate of Non-Coverage;
- 5) **Collection** shall refer to the act of removing solid waste from the source or from a communal storage point;
- 6) **Composting** shall refer to the controlled decomposition of organic matter by microorganisms, mainly bacteria and fungi, into a humus-like product;
- 7) **Consumer electronics** shall refer to special waste that includes worn-out, broken, and other discarded items such as radios, stereos, and TV sets:
- 8) **Department** shall refer to the Department of Environment and Natural Resources;
- 9) **DILG –** Department of Interior and Local Government;
- 10) **Disposal** shall refer to the discharge, deposit, dumping, spilling, leaking or placing of any solid waste into or in a land;
- Disposal site shall refer to a site where solid waste is finally discharged and deposited;
- 12) **ECA –** Environmental Compliance Audit;

- 13) **ECC** Environmental Compliance Certificate;
- 14) Ecological solid waste management shall refer to the systematic administration of activities which provide for segregation at source, segregated transportation, storage, transfer, processing, treatment, and disposal of solid waste and all other waste management activities which do not harm the environment;
- 15) **EMB** Environmental Management Bureau;
- 16) **Environmentally acceptable** shall refer to the quality of being re-usable, biodegradable or compostable, recyclable and not toxic or hazardous to the environment:
- 17) **Generation** shall refer to the act or process of producing solid waste;
- 18) **Generator** shall refer to a person, natural or juridical, who last uses a material and makes it available for disposal or recycling;
- 19) **Hazardous waste** shall refer to solid waste management or combination of solid waste which because of its quantity, concentration or physical, chemical or infectious characteristics may: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed;
- 20) **Leachate** shall refer to the liquid produced when waste undergoes decomposition, and when water percolates through solid waste undergoing decomposition. It is contaminated liquid that contains dissolved and suspended materials;
- 21) **LLDA** Laguna Lake Development Authority;
- 22) **Materials recovery facility** includes a solid waste transfer station or sorting station, drop-off center, a composting facility, and a recycling facility;
- 23) **Municipal waste** shall refer to wastes produced from activities within local government units which include a combination of domestic, commercial, institutional and industrial wastes and street litters;
- 24) Opportunity to recycle shall refer to the act of providing a place for collecting source-separated recyclable material, located either at a disposal site or at another location more convenient to the population being served, and collection at least once a month of source-separated recyclable material from collection service customers and to providing a public education and promotion program that gives notice to each person of the opportunity to recycle and encourage source separation of recyclable material;
- 25) **OSHA** Occupational Safety and Health Administration;
- 26) **P.D. 1586** Environmental Impact Assessment of the Philippines;
- 27) **Person(s)** shall refer to any being, natural or judicial, susceptible of rights and obligations, or of being the subject of legal relations;

- 28) Post-consumer material shall refer only to those materials or products generated by a business or consumer which have served their intended end use, and which have been separated or diverted from solid waste for the purpose of being collected, processed and used as a raw material in the manufacturing of recycled product, excluding materials and by-products generated from, and by-products generated from, and commonly used within an original manufacturing process, such as mill scrap;
- 29) R.A. 7160 Local Government Code;
- 30) R.A. 8749 Clean Air Act of 1999:
- 31) R.A. 9003 Ecological Solid Waste Management Act of 2000;
- 32) **R.A. 9184** Procurement Law:
- 33) R.A. 6969 Controlled Toxic Substances and Hazardous and Nuclear Waste;
- 34) **R.A. 9275** Clean Water Act;
- 35) **Receptacles** shall refer to individual containers used for the source separation and the collection of recyclable materials;
- 36) **Recovered material** shall refer to material and by products that have been recovered or diverted from solid waste for the purpose of being collected, processed and used as a raw material in the manufacture of a recycled product;
- 37) **Recyclable material** shall refer to any waste material retrieved from the waste stream **and** free from contamination that can still be converted into suitable beneficial use or for other purposes, including, but not limited to, newspaper, ferrous scrap metal, non-ferrous scrap metal, used oil, corrugated cardboard, aluminum, glass, office paper, tin cans and other materials as may be determined by the Commission:
- 38) **Recycled material** shall refer to post-consumer material that has been recycled and returned to the economy;
- 39) Recycling shall refer to the treating of used or waste materials through a process of making them suitable for beneficial use and for other purposes, and includes any process by which solid waste materials are transformed into new products in such a manner that the original product may lose their identity, and which may be used as raw materials for the production of other goods or services: Provided, That the collection, segregation and re-use of previously used packaging material shall be deemed recycling under this Act;
- 40) **Re-use** shall refer to the process of recovering materials intended for the same or different purpose without the alteration of physical and chemical characteristics;
- 41) **Resource conversation** shall refer to the reduction of the amount of solid waste that are generated or the reduction of overall resource consumption, and utilization of recovered resources;

- 42) **Resources recovery** shall refer to the collection, extraction or recovery of recyclable materials from the waste stream for the purpose of recycling, generating energy or producing a product suitable for beneficial use: Provided, that such resource recovery facilities exclude incineration;
- 43) **Sanitary landfill** shall refer to a waste disposal site designed, constructed, operated and maintained in a manner that exerts engineering control over significant potential environment impacts arising from the development and operation of the facility;
- 44) **Schedule of Compliance** shall refer to an enforceable sequence of actions or operations to be accomplished within a stipulated time frame leading to compliance with a limitation, prohibition or standard set forth in this Act or any rule of regulation issued pursuant thereto;
- 45) **Secretary** landfill shall refer to the Secretary of the Department of Environment and Natural Resources;
- 46) **Segregation** shall refer to a solid waste management practice of separating different materials found in solid waste in order to promote recycling and re-use of resources and to reduce the volume of waste for collection and disposal;
- 47) **Segregation at source** shall refer to a solid waste management practice of separating, at the point of origin, different materials found in solid waste in order to promote recycling and re-use of resources and to reduce the volume of waste for collection and disposal;
- 48) **Solid waste** shall refer to all discarded household, commercial waste, non-hazardous institutional and industrial waste, street sweepings, construction debris, agricultural waste, and other non-hazardous/non-toxic solid waste.

Unless specifically noted otherwise, the term "solid waste" as used in this Act shall not include:

- (1) Waste identified or listed as hazardous waste of a solid, liquid, contained gaseous or semisolid form which may cause or contribute to an increase in mortality or in serious or incapacitating reversible illness, or acute/chronic effect on the health of persons and other organisms;
- (2) Infectious waste from hospitals such as equipment, instruments, utensils, and fomites of a disposable nature from patients who are suspected to have or have been diagnosed as having communicable diseases and must therefore be isolated as required by public health agencies, laboratory wastes such as pathological specimens (i.e. all tissues, specimens of blood elements, excreta, and secretions obtained from patients or laboratory animals) and disposable fomites that may harbor or transmit pathogenic organisms, and surgical operating room pathologic materials from outpatient areas and emergency rooms; and
- (3) Waste resulting from mining activities, including contaminated soil and debris.
- 49) **Solid waste management** shall refer to the discipline associated with the control of generation, storage, collection, transfer and transport, processing, and disposal of solid wastes in a manner that is in accord with the best principles of public health, economics, engineering, conservation, aesthetics, and other environmental considerations, and that is also responsive to public attitudes;

- 50) **Solid waste management facility** shall refer to any resource recovery system or component thereof; any system, program, or facility for resource conservation; any facility for the collection, source separation, storage, transportation, transfer, processing, treatment, or disposal of solid waste;
- 51) **Source reduction** shall refer to the reduction of solid waste before it enters the solid waste stream by methods such as product design, materials substitution, materials reuse and packaging restrictions;
- 52) **Source separation** shall refer to the sorting of solid waste into some or all of its component parts at the point of generation;
- 53) Special wastes shall refer to household hazardous wastes such as paints, thinners, household batteries, lead-acid batteries, spray canisters and the like. These include wastes from residential and commercial sources that comprise bulky wastes, consumer electronics, white goods, yard wastes that are collected separately, batteries, oil, and tires. These wastes are usually handled separately from other residential and commercial wastes;
- 54) **Storage** shall refer to the interim containment of solid wastes after generation and prior to collection for ultimate recovery or disposal;
- 55) **Transfer stations** shall refer to those facilities utilized to receive solid wastes, temporarily store, separate, convert, or otherwise process the materials in the solid wastes, or to transfer the solid wastes directly from smaller to larger vehicles for transport. This term does not include any of the following:
  - (1) a facility whose principal function is to receive, store, separate, convert or otherwise process in accordance with national minimum standards, manure;
  - (2) a facility, whose principal function is to receive, store, convert, or otherwise process wastes which have already been separated for re-use and are intended for disposals, and
  - (3) the operations premises of a duly licensed solid waste handling operator who receives, stores, transfers, or otherwise processes wastes as an activity incidental to the conduct of a refuse collection and disposal business.
- 56) **Waste diversion** shall refer to activities which reduce or eliminate the amount of solid waste from waste disposal facilities;
- 57) **White goods** shall refer to large worn-out or broken household, commercial, and industrial appliances such as stoves, refrigerators, dishwashers, and clothes washers and dryers collected separately. White goods are usually dismantled for the recovery of specific materials (e.g., copper, aluminum, etc.);
- 58) **Yard waste** shall refer to wood, small or chipped branches, leaves, grass clippings, garden debris, vegetable residue that is recognized as part of a plant or vegetable and other materials identified by the Commission.

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